



# **Air Quality Permitting Statement of Basis**

**February 12, 2008**

**Permit No. P-060024**

**Valley Paving & Asphalt, Inc., Portable**

**Facility ID No. 777-00086**

Prepared by:

Tracy Drouin  
Permit Writer

and

Jonathan Pettit  
Permit Writer

**AIR QUALITY DIVISION**

**PUBLIC COMMENT**

## Table of Contents

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE .....	3
1. PURPOSE .....	4
2. FACILITY DESCRIPTION.....	4
3. FACILITY / AREA CLASSIFICATION .....	4
4. APPLICATION SCOPE .....	4
5. PERMIT ANALYSIS .....	7
6. PERMIT FEES .....	16
7. PERMIT REVIEW .....	16
8. RECOMMENDATION .....	17
APPENDIX A, AIRS INFORMATION .....	18
APPENDIX B, EMISSIONS INVENTORY .....	20
APPENDIX C, AIR DISPERSION MODEL .....	30
APPENDIX D, USED OIL CERTIFICATE.....	32
APPENDIX E, RISK ANALYSIS .....	34

## Acronyms, Units, and Chemical Nomenclatures

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
°F	degrees Fahrenheit
gr/dscf	grains per dry standard cubic feet
HAPs	hazardous air pollutants
HMA	hot-mix asphalt
hp	horsepower
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
kW	kilowatt
lb/hr	pound per hour
MMBtu/hr	million British thermal units per hour
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
PCB	polychlorinated biphenyl
PM	particulate matter
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	prevention of significant deterioration
PTC	permit to construct
PTE	potential to emit
RAP	recycled asphalt pavement
S	sulfur
SIC	Standard Industrial Classification
SM	synthetic minor
SO <sub>2</sub>	sulfur dioxide
TAP	toxic air pollutant
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

## **1. PURPOSE**

The purpose of this PTC is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, Procedures and Requirements for Permits to Construct. This permit to construct (PTC) replaces PTC 777-00086, dated June 10, 1993, for the Valley Paving & Asphalt, Inc. hot-mix asphalt (HMA) facility.

## **2. FACILITY DESCRIPTION**

The facility is a portable, hot-mix asphalt plant. Aggregate, sand and asphalt chips (RAP or recycled asphalt product) are transferred to feed bins, then conveyed to a 70 MMBtu/hr oil-fired, parallel flow, drum mix aggregate dryer. Heated asphalt oil from a storage tank is introduced at the middle of the drum unit, and mixed with the aggregate. The resulting asphalt product is then transferred to a storage silo via an enclosed slat conveyor and held until it is later loaded into trucks and hauled offsite. The production of hot-mix asphalt includes aggregate handling operations which may include front end loaders, storage bins, conveyance systems, stock piles and haul trucks.

Electrical power for the plant is provided by the local power grid. The asphalt drum mix dryer is fueled by used oil or No. 2 fuel oil.

## **3. FACILITY / AREA CLASSIFICATION**

This facility is not a major facility as defined by 40 CFR 52. Potential to emit is limited to less than major source threshold levels. This facility is not a major facility as defined by IDAPA 58.01.01.008.10 because it's potential to emit is limited to less than all tier I major facility thresholds. The SIC code defining the facility is 2950 (Asphalt Paving Mixtures and Blocks). The AIRS classification is for the facility is "SM".

The AIRS information provided in Appendix A defines the classification for each regulated air pollutant for the Valley Paving & Asphalt, Inc. portable HMA facility. This information is entered into the EPA AIRS database.

## **4. APPLICATION SCOPE**

Valley Paving & Asphalt, Inc. operates a portable HMA plant that was previously permitted to use a Aesco parallel flow drum-mix asphalt plant with a maximum rated heat input of 70 MMBtu/hr, a maximum rated output of 200 tons of HMA per hour, with a maximum of 1,400 hours per year (280,000 tons of produced asphalt per year), fired using ASTM Grade 2 fuel oil.

Particulate matter (PM) emissions from the drum dryer were described as being vented to a wet venturi scrubber, with a water flow of 60-140 gpm, pressure drop of 12-15 inches of water, an air flow rate of 28,000 acfm and an exhaust temperature of 140 degrees Fahrenheit (°F). Electrical power has been provided by the local utility.



DEQ issued a Consent Order to the facility, signed August 9, 2006, as a result of five violations documented from an October 19, 2005 inspection. The Consent Order required the facility to comply with the existing permit by controlling fugitive dust and keeping records of such, by operating at the existing permitted production limit of 200 tons per hour, and by combusting No. 2 fuel oil exclusively. In order for the facility to increase hourly production and combust used oil in addition to No. 2 fuel oil, the facility would need to modify the current PTC, as mentioned in the consent order.

On May 31, 2006, DEQ received a PTC application from Valley Paving & Asphalt, Inc. requesting to increase hourly asphalt production rate from 200 tons per hour to 300 tons per hour and to combust used oil in addition to No. 2 fuel oil in the drum dryer burner.

According to Chris Seubert (Valley Paving & Asphalt, Inc. President), the HMA plant is rated at 200 T/hr, but is capable of more asphalt production per hour when raw product conditions are favorable for such (i.e. if aggregate is very dry initially entering the drum dryer, less dry time from the drum dryer is needed, allowing for additional production at a faster rate).

The facility has requested a 100 T/hr increase to total 300 T/hr throughput. It is unlikely that the HMA will operate at 300 T/hr on a regular basis since the facility's annual production hours remain limited to 1,400 and annual asphalt throughput is limited to 280,000 T/yr. The increase in hourly throughput will simply allow the facility to produce asphalt more quickly at times when raw product conditions are favorable and demand for asphalt is high. Furthermore, if the facility is able to maintain production at 300 T/hr at all times, the annual production hours would be reduced 934 hours to comply with the annual asphalt production limit of 280,000 T/yr.

Table 4.1 shows the comparison of the existing permitted operations and the changes proposed in this PTC.

**Table 4.1 SUMMARY OF PREVIOUS PERMITTED OPERATIONS AND PROPOSED CHANGES**

<b>Operation/Process</b>	<b>Existing Permit No. 777-00086</b>	<b>Proposed Changes</b>
<b>Production</b>	200 tons per hour	300 tons per hour (100 tons per hour increase)
<b>Drum Dryer Fuel</b>	#2 Fuel Oil	#2 Fuel Oil and used oil with 0.5% sulfur content limit

#### **4.1 Application and Permit to Construct Chronology**

May 31, 2006	DEQ received the PTC application.
June 30, 2006	DEQ determined the application determined complete.
July 14, 2006	DEQ provided a public notice for an opportunity for a public comment period began.
August 9, 2006	DEQ requested additional information from the applicant.
August 14, 2006	The opportunity for a public comment period closed. A public comment period was requested.
August 22, 2006	The DEQ State Office provided a draft permit to its Boise Regional Office for review and comment. Several comments were received and incorporated into the permit.
August 29, 2006	DEQ provided the draft permit to the facility for review and comment.
September 14, 2006	DEQ received a request from the facility to extend its review time until September 29, 2006.
September 29, 2006	DEQ received comments from the facility on the draft permit. Most of the comments received were incorporated into the permit. The comments which were not incorporated into the permit were beyond the scope of the modification application.
November 10, 2006	The public comment period started.
November, 22, 2006	DEQ received a request to extend the public comment period to January 12, 2007. DEQ granted the request.
November 28, 2006	DEQ held an informational meeting in McCall to inform the public and answer questions regarding the proposed PTC. The Deputy City Manager of McCall attended the meeting to answer any zoning questions.
January 11, 2007	DEQ held a hearing in McCall regarding the PTC.
January 12, 2007	the public comment period ended.
February 22, 2007	DEQ determined it necessary to complete a risk analysis for facility-wide emissions based on modeling results.
March 8, 2007	DEQ staff met with City of McCall planning and zoning to determine locations of existing and future receptors to assist with revised modeling and the risk analysis.
June 15, 2007	DEQ completed a revised modeling analysis using AERMOD.
August 2, 2007	DEQ completed its risk assessment.
December 7, 2007	DEQ Reassigned Permit Writer
December 14, 2007	DEQ Finalized the revised modeling analysis
January 25, 2008	DEQ Finalized the revised risk assessment



## 5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action.

### 5.1 *Equipment Listing*

#### HMA Plant:

Manufacturer: Aesco  
Burner Model: SJ360  
Type of HMA plant: Parallel flow  
Drum dryer rated heat input capacity: 70 MMBtu/hr drum dryer

#### Wet Venturi Scrubber:

Manufacturer: Aesco  
Model: GB200 VWS

#### Associated Storage Equipment:

Asphalt storage tank: 15,000 gallon capacity  
Distillate fuel oil tank: 8,000 gallon capacity  
Used oil fuel tank: 8,000 gallon capacity

### 5.2 *Emissions Inventory*

The facility provided an emissions inventory for criteria pollutants, hazardous air pollutants (HAPs), and toxic air pollutants (TAPs) which is a state-only requirement. Emission estimates were based on emission factors from EPA's AP-42 Section 11.1, Hot Mix Asphalt Plants, March 2004. AP-42 emissions factors for drum mix asphalt plants are independent of the drum dryer design. Consequently, emissions estimates for the drum mix plant are applicable for either parallel flow or counter flow drum mix plants.

An emissions inventory was also prepared by DEQ as a verification analysis. Two major differences from the consultant's submittal were discovered as discussed below.

First, the consultant's PM and PM<sub>10</sub> emissions were based on NSPS grainloading standards from the existing PTC. Although PM<sub>10</sub> emission estimates are provided in the application they are not correct because the back-half catch (condensibles) are not included. Therefore, DEQ calculated PM<sub>10</sub> emissions based on AP-42 Table 11.1.3. A PM<sub>10</sub> fraction for filterable was not available for a scrubber, so a PM<sub>10</sub>/PM fraction for a baghouse was used. The individual calculations for PM<sub>10</sub> are shown in Appendix B. The PM<sub>10</sub> emissions shown in DEQ's emissions inventory spreadsheet were not used because the individual calculation for PM<sub>10</sub> is more accurate.

Second, the consultant based annual criteria pollutant emissions on 1,400 hours per year of operation rather than the throughout limit of 280,000 T/yr of asphalt production. Although the PTC requires an annual hours of operation limit of 1,400 hours, it also requires an annual throughout limit of 280,000 T/yr of asphalt production. The annual throughput limit is more restrictive if operating at 300 T/hr, therefore annual emissions should be based on the annual throughput limit. As a result, the emissions inventory prepared by DEQ show less annual emissions for the criteria pollutants when compared to the consultant's emissions inventory.

The emissions inventory submitted by the facility and DEQ's prepared emissions inventory is included in Appendix B.

## Facility Design and Operational Limits

Emission estimates from the HMA plant were based on the operational limits shown in Table 5.1.

**Table 5.1 OPERATIONAL CONSTRAINTS USED FOR EMISSION ESTIMATES**

Emission Unit	Throughput or Fuel Usage		Hours of Operation	
Drum Dryer	Throughput: 300 T/hr	Throughput: 280,000 T/yr	24 hours/day	1,400 hours/yr

T/hr = tons per hour

T/yr = tons per year

## Emissions for Multiple Fuel Types

The emission units and fuels evaluated for this PTC are summarized in Table 5.2. Emissions estimates were calculated for each fuel evaluated for use in the HMA.

**Table 5.2 EMISSION SOURCES, FUEL TYPES, AND EMISSION FACTORS**

Emission Source	Fuel Type(s) Evaluated	Emission Factor Source
HMA Drum Dryer with Wet Venturi Scrubber	Distillate Fuel Oil	AP-42, Section 11.1
	Used Oil (max 0.5% S)	AP-42, Section 11.1

## Change in Emissions

A modification is triggered when there is a physical change or change in the method of operation that results in an increase of emissions. In this case, the change in the method of operation (100 T/hr HMA production increase and ability to use used oil as a drum dryer burner fuel) results in an emissions increase.

Therefore, emissions estimates needed only to be based on the change in hourly throughput (100 T/hr) requested in the PTC application. However, to be conservative, the applicant estimated emissions for No. 2 fuel oil and used oil on the total emissions of 300 T/hr rather than only the change in emissions of 100 T/hr. DEQ also prepared an emissions inventory based on the total emissions of 300 T/hr rather than the change in emissions. Emissions for used oil are the same as No. 2 fuel oil, except for SO<sub>2</sub> and 13 additional regulated pollutants as discussed in the following section.

## Additional Pollutants for Used Oil

Used oil burned for energy recovery must meet specifications as listed in Permit Condition 3.6. Permit Condition 3.22 requires a certification from the used oil distributor to demonstrate compliance with the specifications. A copy of a used oil certification is included in Appendix D. The used oil specifications and certification requirements ensure that only the pollutants accounted for in the emissions inventory are actually emitted.

Based on AP-42 Section 11.1 emission factors, emissions of non-criteria pollutants in pounds per hour from the drum dryer are expected to be the same whether using distillate fuel oil or used oil, except that 13 additional pollutants are emitted when using used oil. Four of these additional pollutants—benzaldehyde, butyraldehyde, hexanal, and isovaleraldehyde—represent additional emissions of organic compounds, but are neither federally regulated HAPS nor Idaho TAPs. The emissions of the remaining nine potentially emitted pollutants—all of which are regulated as Idaho TAPS, five of which are also federally regulated HAPs—are shown in Table 5.3, and represent new TAPs emissions associated with this PTC modification. The emissions estimates from the additional used oil pollutants are based on 300 T/hr as the change in emissions. Additionally, AP-42 has a different emission factor for SO<sub>2</sub> when combusting used oil in the drum dryer (0.058 is the EF for SO<sub>2</sub> for used oil; 0.011 is the EF for SO<sub>2</sub> for



ASTM Grade 2 fuel oil). Therefore, SO<sub>2</sub> emissions are estimated to be higher when burning used oil. The additional pollutant emissions for used oil are included in Appendix B.

**Table 5.3 ADDITIONAL REGULATED EMISSIONS FROM COMBUSTING USED OIL**

Pollutant	Drum Dryer Used Oil (lb/hr)
SO <sub>2</sub> <sup>a</sup>	17.4
Hydrogen chloride (HCl)	0.06
<b>Non-Polycyclic Aromatic Hydrocarbon Hazardous Air Pollutants (non-PAH HAPs)</b>	
Acetaldehyde	0.390
Acrolein	0.0078
Methyl Ethyl Ketone	0.0060
Propionaldehyde	0.0390
Quinone	0.0480
<b>Non-HAP Organic Compounds</b>	
Acetone	0.249
Crotonaldehyde	0.0258
Valeraldehyde	0.0201

<sup>a</sup> SO<sub>2</sub> was included in the table because the emission factor is different for used oil than for No. 2 fuel oil.

### 5.3 Modeling

A technical review of the submitted air dispersion modeling analyses submitted with the application was conducted by DEQ. Additionally, DEQ also performed an independent, more thorough and refined air dispersion modeling analyses to evaluate potential impacts of the HMA facility. The original refined analyses used the model ISCST 3, and included facility-wide emissions from the asphalt plant and also included potential impacts from a concrete batch plant and a rock crusher which operate within close proximity of the HMA plant. Facility-wide analyses are typically outside of the scope for a PTC modification such as this, but DEQ chose to initially include the facility-wide modeling due to a residential neighborhood in close proximity to the HMA facility. The facility-wide modeling was originally included for informational purposes and was not examined in further detail. All emission increases from this modification as initially evaluated, did not exceed any air quality standards based on air dispersion modeling analyses for the pollutants.

Numerous comments and questions regarding the PTC modification were received by DEQ after the first public comment period. In an attempt to address concerns raised by the public, DEQ revised the modeling analysis using the model "AERMOD" and again looked at facility-wide emissions which included a concrete batch plant and rock crusher in addition to the HMA plant.

For criteria pollutants (PM<sub>10</sub>, CO, SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, and Lead), PM<sub>10</sub> was the only pollutant that required facility-wide modeling. The other criteria pollutants were below modeling threshold levels and adequately demonstrated compliance with NAAQS.

A full impact analysis for PM<sub>10</sub> was determined necessary by DEQ because of the presence of nearby contributing sources (concrete batch plant and rock crusher).

The results most air receptors were less than the NAAQS. However, three receptors along a road segment near the facility were slightly above the NAAQS. Again, these results included emissions from the concrete batch plant, rock crusher, and HMA plant. Also, the analysis was based on the concrete

batch plant operating 24 hours per day (which is unlikely). Based on the modeling results for PM<sub>10</sub>, additional requirements to control fugitive dust were added to the PTC. With the addition of aggressive controls for fugitive dust and the likelihood that production is reduced during months from October through April (asphalt is not typically produced or laid during the winter), it is the professional judgment of DEQ staff that compliance with the 24-hour PM<sub>10</sub> NAAQS will be met.

A facility-wide modeling analysis was also conducted for 10 previously identified TAPs which exceeded their respective AAC/AACCs as listed in IDAPA 58.01.01.585 and 586. Again, these emissions included those emitted from the concrete batch plant, rock crusher, and HMA plant. The results show that four of the ten TAPs were greater than 100% of the respective AACCs. The modeling analysis includes the source of the emissions in Table 8. The entire modeling analysis is included in Appendix C.

Because 4 carcinogenic TAPs exceed respective AACCs (polycyclic organic matter, arsenic, chromium 6+, and nickel) DEQ conducted a risk analysis. The risk analysis also addressed formaldehyde because levels were close to exceeding the AACC. The risk analysis is discussed in section 5.4 below.

#### **5.4 Risk Analysis**

Again, the four TAPs that exceeded the AACC levels were polycyclic organic matter, arsenic, chromium 6+, and nickel. Additionally, formaldehyde was close to exceeding the AACC limit. As a result of the exceedances and to respond to public concerns, DEQ's Air Toxics Analyst prepared a risk analysis of the five TAPs.

The risk analysis presented and compared possible health impacts via multi-pathway TAP exposures such as inhalation, ingestion or dermal exposure. The risk assessment also considered exposure duration (i.e., 9, 30 and 70 years). For inhalation risks, high and average breathing rates with exposure duration to the pollutants were evaluated and compared to determine risk.

Two locations were analyzed in detail. These locations were the maximum exposed individual resident, or the residential location off-site that has the highest risk, and the maximum exposed individual worker, or the work-place off-site that has the greatest risk. These locations are described in the modeling memo in Appendix C and shown in Figure 1 of the Risk Analysis included in Appendix E.

The risk analysis for both locations determined risk levels less than ten in one million, meaning that if one million people in the three locations were exposed to the pollutants at those concentrations for 70 years, it's possible that ten people could develop cancer or health impacts as a result, or, one person out of one hundred thousand. According to the risk analysis, these levels are considered to be very low and based on EPA and DEQ hazardous waste guidelines, the levels do not pose a significant excess cancer risk.

The entire risk analysis is included in Appendix E.



## 5.5 **Regulatory Review**

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

### IDAPA 58.01.01.201 ..... Permit to Construct Required

The modification to Valley Asphalt & Paving's portable hot-mix asphalt facility does not meet the permit to construct exemption criteria contained in sections 220 through 223 of the Rules. Therefore, a modified PTC is required.

### IDAPA 58.01.01.209.03 ..... Ambient Air Quality Standards

This facility has demonstrated to DEQ's satisfaction that its emissions will not cause or contribute to a violation of any ambient air quality standard. As long as Valley Paving & Asphalt complies with the terms and conditions of the permit, all applicable air quality standards will be met.

### 40 CFR 60, Subpart I ..... New Source Performance Standards

Valley Paving & Asphalt's portable hot-mix asphalt plant is an affected facility in accordance with 40 CFR 60.90. An initial performance test was conducted in 1993 and demonstrated compliance with the NSPS standard of .04 gr/dscf and the visible emissions standard of less than 20% opacity..

### 40 CFR 279 ..... Standards for the Management of Used Oil

Part 279.11 contains specifications for used oil which include allowable levels for arsenic, cadmium, chromium, lead, the flash point, and total halogens. The limit for total halogens is listed at 4,000 ppm maximum. However, used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under § 279.10(b)(1). Such used oil is subject to subpart H of part 266 of this chapter rather than this part when burned for energy recovery unless the presumption of mixing can be successfully rebutted. Therefore, the permit limits the total halogens to 1,000 ppm. This permit condition is consistent with previous permits issued for hot-mix asphalt plants<sup>1</sup>.

Permit Condition 3.5 states that, in accordance with 40 CFR 279.11, used oil burned for energy recovery shall not exceed any of the allowable levels of the constituents and property listed in Table 5.4. These permit conditions are considered reasonable permit conditions because they inherently limit air pollution emissions.

---

<sup>1</sup> PTC-030138 Interstate Concrete, Hayden Lake, 2/18/05 & PTC-040101 Interstate Concrete, Rathdrum, 2/18/05



**TABLE 5.4 USED OIL SPECIFICATIONS<sup>1</sup>**

Constituent/property	Allowable Level for On Specification Used Oil
Arsenic	5 ppm <sup>2</sup> maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100°F minimum
Total halogens	1,000 ppm maximum
PCBs <sup>3</sup>	< 2 ppm

<sup>1</sup>The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see 40 CFR 279.10(b)).

<sup>2</sup>Parts per million

<sup>3</sup>Applicable standards for the burning of used oil containing PCBs are imposed by 40 CFR 761.20(e)

This table is based on Table 1 from 40 CFR 279.11, incorporating the 1,000 ppm limit for total halogens as explained above.

DEQ's Waste Program has reviewed and approved the above discussions regarding regulating used oil.

#### IDAPA 58.01.01.210.....Demonstration of Preconstruction Compliance with Toxic Standards

The TAP requirements for PTCs are specified in IDAPA 58.01.01.210. TAPs emissions increases from a modification that exceed screening emission levels (ELs) of IDAPA 58.01.01.585 or 586 must have an ambient impact assessment for the increase in emissions. Compliance with these TAP requirements are demonstrated if the results of the ambient impact estimate for the applicable TAPs are below Acceptable Ambient Concentrations (AACs) for non-carcinogens of TAPs listed in IDAPA 58.01.01.585 or Acceptable Ambient Concentrations for Carcinogens (AACCs) for carcinogenic TAPs listed in IDAPA 58.01.01.586.

The change in the facility's estimated toxics emissions from this PTC include nine additional TAPs that are emitted when using used oil instead of distillate fuel oil in the drum dryer. Additionally, the change in existing TAPs emissions was based on an increase of 100 tons per hour (from 200 T/hr to 300 T/hr). The annual production of 280,000 tons was not increased, therefore, the only annual increase in TAPs resulted from the nine additional TAPs emitted from the burning of used oil.

Compliance with applicable TAP increments were demonstrated by modeling uncontrolled TAP emissions increases resulting from the facility modifications (the TAPs emissions calculated as uncontrolled was a conservative inventory since the facility uses a wet venturi scrubber is used as a control device). TAPs that exceeded the EL were modeled and were determined to be below their respective AACs or AACCs. The toxic air pollutant emissions inventory can be seen in Appendix B and results of toxic air pollutant modeling can be seen in the Modeling section of this document (Section 5.3) and Appendix C.

Compliance with IDAPA 58.01.01.210 has been demonstrated by the facility to DEQ's satisfaction. In accordance with IDAPA 58.01.01.203.03, preconstruction compliance with IDAPA 58.01.01.161 has also been demonstrated. In addition to the demonstrated compliance with the toxic standards discussed in this section, production limits have been set in the PTC to protect human health and the environment.

## 5.6 Permit Conditions Review

This section describes permit conditions that have been renumbered, modified or deleted as a result of this permit action. The modified PTC has been reformatted, includes new requirements and conditions

specific to the processes at the facility. Additionally, the General Provisions have been updated in the modified PTC.

Specific permit condition changes are detailed below. “Existing Permit Condition” refers to conditions in Permit No. 777-00086 issued June 10, 1993. “Modified Permit Condition” refers to conditions in this modified PTC. Modified permit conditions have been renumbered from those in the existing permit, and have been slightly changed/updated to include additional rules and requirements that are now applicable. “New Permit Condition” refers to new conditions in this PTC, which were not included in the existing permit. “The modified PTC” refers to this permit, PTC No. P-060024.

### **Modified Permit Conditions**

Existing Permit Conditions 1.1 through 1.4 contain the process and control descriptions, equipment and stack specifications.

Modified Permit Conditions 1 through 2.2 contain the purpose of the PTC, emission sources, process and emissions control description.

Existing Permit Conditions 2.1.1 and 2.1.2 contain emission limits for criteria pollutants.

Modified Permit Condition 3.1 contains emission limits for PM, PM<sub>10</sub> and CO. CO emissions are included because it is the criteria pollutant with the highest T/yr emissions for the facility as shown in the emissions inventory supplied by the applicant’s consultant (Appendix B).

Existing Permit Conditions 2.1.3 and 2.3 contain visible emissions limits for the asphalt scrubber stack and asphalt oil storage tank, respectively.

Modified Permit Condition 3.2 contains visible emissions limits for any stack, vent, or other functionally equivalent opening.

Existing Permit Condition 2.2 contains fugitive emissions requirements.

Modified Permit Condition 3.4 contains fugitive emissions requirements and reasonable precautions to prevent PM from becoming airborne.

Existing Permit Condition 2.4 requires sulfur content of No. 2 fuel oil not to exceed 0.5 percent.

Modified Permit Condition 3.7 requires sulfur content of ASTM Grade 1 fuel oil not to exceed 0.3% by weight and ASTM Grade 2 fuel oil not to exceed 0.5% by weight. This PTC allows the use of distillate fuel oil, which includes both ASTM Grades 1 and 2, which must meet the respective sulfur percentage limits in accordance with IDAPA 58.01.01.728.

Existing Permit Condition 3.1 requires the permittee to install, calibrate, maintain and operate a monitoring device for continuous measurement of the change in pressure across the wet venturi scrubber throat.

Modified Permit Condition 3.10 incorporates existing Permit Condition 3.1.

Existing Permit Condition 3.1.1 requires recording pressure drop across the wet venturi scrubber throat once per week while the plant is operating at normal capacity.

Modified Permit Condition 3.20 includes required monitoring and recording of the pressure drop across the wet venturi scrubber throat once per day while the plant is operating at normal capacity.

Existing Permit Condition 3.1.2 requires the wet venturi scrubber monitoring device for pressure drop to be certified by the manufacturer and calibrated at least once annually.



Existing Permit Condition 3.1.3 requires wet venturi scrubber maintenance when visible emissions exceed 10 percent opacity more than three minutes in any 60 minute period.

Existing Permit Condition 3.2.2 requires the wet venturi scrubber monitoring device for flow rate to be certified by the manufacturer and calibrated at least once annually.

Modified Permit Condition 3.11 incorporates general requirements of existing permit conditions 3.1.2, 3.1.3 and 3.2.2 by requiring the permittee to develop and follow an operations and maintenance manual based on manufacturer's information, recommendations, and to include equipment inspection checklists and frequency of inspections.

Existing Permit Condition 3.2 requires the permittee to install, calibrate, maintain and operate a monitoring device for continuous measurement of the water flow rate to the wet venturi scrubber.

Modified Permit Condition 3.10 incorporates existing Permit Condition 3.2.

Existing Permit Condition 3.2.1 requires recording water flow rate of the wet venturi scrubber once per week while the plant is operating at normal capacity.

Modified Permit Condition 3.19 includes required monitoring and recording of wet venturi scrubber water flow rate once per day while the plant is operating at normal capacity.

Existing Permit Condition 3.3 requires the permittee to conduct a performance test for PM emissions from the scrubber stack in accordance with 40 CFR Part 60, Subpart I and DEQ's procedures.

Existing Permit Conditions 3.4 through 3.4.5 list the data required to be monitored and recorded during the performance testing.

Modified Permit Condition 3.21 requires performance testing for PM emissions from the scrubber stack in accordance with 40 CFR Part 60, Subpart I and DEQ's procedures, as well as to test at least once every five years to demonstrate compliance. The five year testing requirement was included based on requirements for other asphalt plants, complaint history, quantity of emissions and internal source testing guidelines. Data to be monitored and recorded remains unchanged and is included in modified permit condition 3.21.

Existing Permit Conditions 3.5 through 3.5.3 list monitoring and recording requirements for fugitive dust control.

Modified Permit Condition 3.20 requires the permittee to conduct monthly, facility-wide inspections for fugitive emissions and to record and retain records of the inspections.

Existing Permit Condition 4.1 limits the hourly production rate to 200 tons of asphalt per hour and no more than 280,000 tons of asphalt per year.

Modified Permit Condition 3.8 limits the hourly production rate to 300 tons of asphalt per hour (a 100 ton per hour increase). Annual asphalt tons remain limited to 280,000 tons. The applicant has successfully demonstrated that the hourly increase in production rate complies with all applicable air quality standards.

Existing Permit Condition 4.2 limits hours of operation to 1400 hours per year. This condition is unchanged and listed as 3.9 in the modified PTC.

Existing Permit Condition 4.3 allows the drum-mix asphalt plant to be fired by No. 2 fuel oil.

Modified Permit Condition 3.5 allows the plant to be fired by used oil or No. 2 fuel oil as requested in the PTC application.



Existing Permit Condition 4.4 requires the wet venturi scrubber to be operated at all times during the operation of the drum dryer. This has been incorporated as 3.14 in the modified PTC.

Existing Permit Condition 4.5 requires the wet venturi scrubber pressure drop to remain within 30 percent of recent recorded performance test values.

Modified Permit Condition 3.12 requires the wet venturi scrubber pressure drop to be maintained within manufacturer and O&M manual specifications.

Existing Permit Condition 4.6 requires the permittee to apply an environmentally safe chemical soil stabilizer to haul roads.

Modified Permit Condition 3.4 requires reasonable control of fugitive emissions in accordance with IDAPA 58.01.01.650-651.

Existing Permit Condition 4.7 requires suspension of operations during any air stagnation advisories when operating in a nonattainment area. This condition was deleted since the facility cannot operate in a nonattainment area under this PTC.

Existing Permit Condition 4.8 requires asphalt equipment to be set back at least 140 feet from any property boundary. This condition was deleted because modeling was based on receptors closer than 140 feet from the property boundary.

Existing Permit Conditions 5.1 and 5.2 are performance test requirements. These requirements are included in General Provision 6 in the modified PTC and also through reference to IDAPA 58.01.01.157 in modified Permit Condition 3.21.

Existing Permit Condition 5.3 requires the permittee to record hours of operation, monitoring results in a monthly report and retain records for a two year period for pressure change and water flow rate related to the wet venturi scrubber.

Modified Permit Condition 3.19 includes the requirements listed in existing permit condition 5.3.

Modified Permit Condition 3.13 requires the permittee to maintain scrubbing media flow rate within manufacturer and O & M manual specifications.

Existing Permit Conditions 5.4 through 5.4.3 list specific relocation requirements for the portable facility.

Modified Permit Condition 3.25 includes the relocation requirements and a link to registration forms.

Existing Permit Condition 5.5 requires DEQ approval to operate in a nonattainment area.

Modified Permit Condition 4 requires a PTC application to be submitted to DEQ for the facility to operate in a PM<sub>10</sub> Nonattainment area.

Existing Permit Condition 5.6 requires DEQ approval of all chemical dust suppressants prior to use. This condition was deleted. Chemical dust suppressants applied would need to meet any applicable regulations as alluded to in General Provision 4 in the modified PTC.

### **New Permit Conditions**

Several new conditions have been added as a result of the PTC requests, facility compliance history and complaint information. The following new permit conditions have been added to the modified PTC:

New Permit Condition 3.3 addresses odors. The existing permit does not specifically include odor requirements as a permit condition. This condition was added for compliance with IDAPA 58.01.01.775 and 776 which are applicable to the facility.

New Permit Condition 3.6 limits the amount of lead, arsenic, cadmium, chromium, volatiles, halogens, and PCBs that may be present in any used oil burned for energy recovery. Required used oil limits are listed as imposed by 40 CFR 279.11.

New Permit Condition 3.15 addresses collocation. The existing permit does not address collocation. The modified PTC prohibits collocation with any other HMA plant.

New Permit Condition 3.16 requires the permittee to maintain records of all odor complaints received and lists required record contents. This condition was added as a result of new permit condition 3.3.

New Permit Condition 3.17 requires an odor management plan to be developed within 30 days of permit issuance. This new permit condition was included in the modified PTC based on comments and complaints from the public regarding odors originating from the facility, increased hourly production and alternate used oil combustion as requested in the modified PTC.

New Permit Condition 3.22 requires obtaining certification that used oil meets specifications as listed in new permit condition 3.6 and to maintain certification records on site for the most recent two years.

New Permit Condition 3.23 requires maintaining records showing the sulfur content of fuel oil on an as-received basis.

New Permit Condition 3.24 requires the permittee to submit semiannual reports to DEQ summarizing occurrences or non-occurrences of odor complaints. This condition was added as a result of new permit condition 3.3 and to address ongoing concerns of the public.

## **6. PERMIT FEES**

Valley Paving & Asphalt paid the \$1,000 permit to construct application fee as required in IDAPA 58.01.01.224 on May 31, 2006.

A permit to construct processing fee of \$1,000 is required in accordance with IDAPA 58.01.01.225, because the increase in emissions from the changes associated with this PTC is less than one ton per year. The processing fee was paid on September 11, 2006.

## **7. PERMIT REVIEW**

### **7.1 *Regional Review of Draft Permit***

On August 23, 2006, the Boise Regional Office was provided a draft of the permit and statement of basis for review and comment. Several comments were received and incorporated into the permit as authorized.

### **7.2 *Facility Review of Draft Permit***

The facility was provided the draft permit for review on August 29, 2006. The facility responded with comments on September 29, 2006. The comments were incorporated into the permit.

### **7.3 *Public Comment***

An opportunity for public comment period on the PTC application was provided from July 14 through August 14, 2006, in accordance with IDAPA 58.01.01.209.01.c. During this time, DEQ received several comments on the application, and a public comment period for the PTC was requested.



The public comment period was held from November 10, 2006 to January 12, 2007. An informational hearing for the PTC modification was held on November 28, 2006. A public hearing for the PTC modification was held January 11, 2007. During this time numerous comments were received on the PTC modification.

Changes were incorporated into the PTC as a result of the initial public comment period. It was determined that another public comment period would be held due to changes to the PTC, modeling and inclusion of a risk analysis and original response to comments.

Another public comment period was held on February XX, 2008 to XX XX, 2007. An informational meeting and public hearing were held on November XX, 2007. During this time, additional comments ~~were/were~~ not received and addressed.

## **8. RECOMMENDATION**

Based on review of application materials, and all applicable state and federal rules and regulations, DEQ staff recommends that PTC No. P-060024 be provided for public comment as required by IDAPA 58.01.01.209.01.c.

JP/hp P-060024